

BPA's Annual Joint Operating Committee Annual Meeting

February 16, 2021



Agenda

Topics	Presenter
Intro and Joint Operating Committee (JOC) rules	Cherilyn Randall
BPA's Interconnection Process	Cherilyn Randall
NERC's Recommendation for Voltage Control & Voltage Schedules	Cherilyn Randall
Oversupply <ul style="list-style-type: none">• 2020 Season Overview• Loss Waivers• System Test	Sarah Arison, Rob Hawkins Andy Meyers Frank Puyleart
Reminders	Cherilyn Randall



Introduction & JOC Rules



Introduction and JOC Rules

- JOC meetings are open meetings to all interested parties, though they are targeted towards generation owners/operators.
- Non-JOC member participation is welcome however the meeting focus is to ensure JOC members (BPA and generator owners/operators) are able to address all issues.
- JOC members (BPA and generator owners/operators) may propose agenda items, recurring or non-recurring, for future JOC meetings.
- JOC meetings are for discussing and reporting on operational issues that affect large portions of the generation fleet. Development of new policies or procedures may require a series of meetings outside of the JOC meetings. Issues that affect only one or two generators will be handled outside of the JOC.

BPA's Interconnection Process



Upcoming BP changes due to TC-22

- Surplus Interconnection Business Practice (BP) will be retired – process will be added to the OATT
 - LGIP BP – plan to add some language on how to apply for Surplus Interconnection
- Repower and Replacements processes will be added to the OATT
 - LGIP and SGIP BP's plan to add some language on how to submit repower and replacement requests
- Technological Advancement language will be added to the OATT
 - Not sure if anything will remain in a BP or not?

Interconnection vs. Integration

- The Generation Integration Services BP directs generator developers to put a request into BPA's queue if they are connecting to one of the public utilities in our BAA.
 - This was originally intended to address the problem of obtaining a time stamp and setting queue priority.
 - Some large PUD's are running a public queue (time-stamped) and want to be treated like a neighboring IOU and have BPA use the Affected Utility System Study process.
- We may identify and need to address other updates in the future.

NERC's Recommendation for Voltage Control & Voltage Schedules for Generators

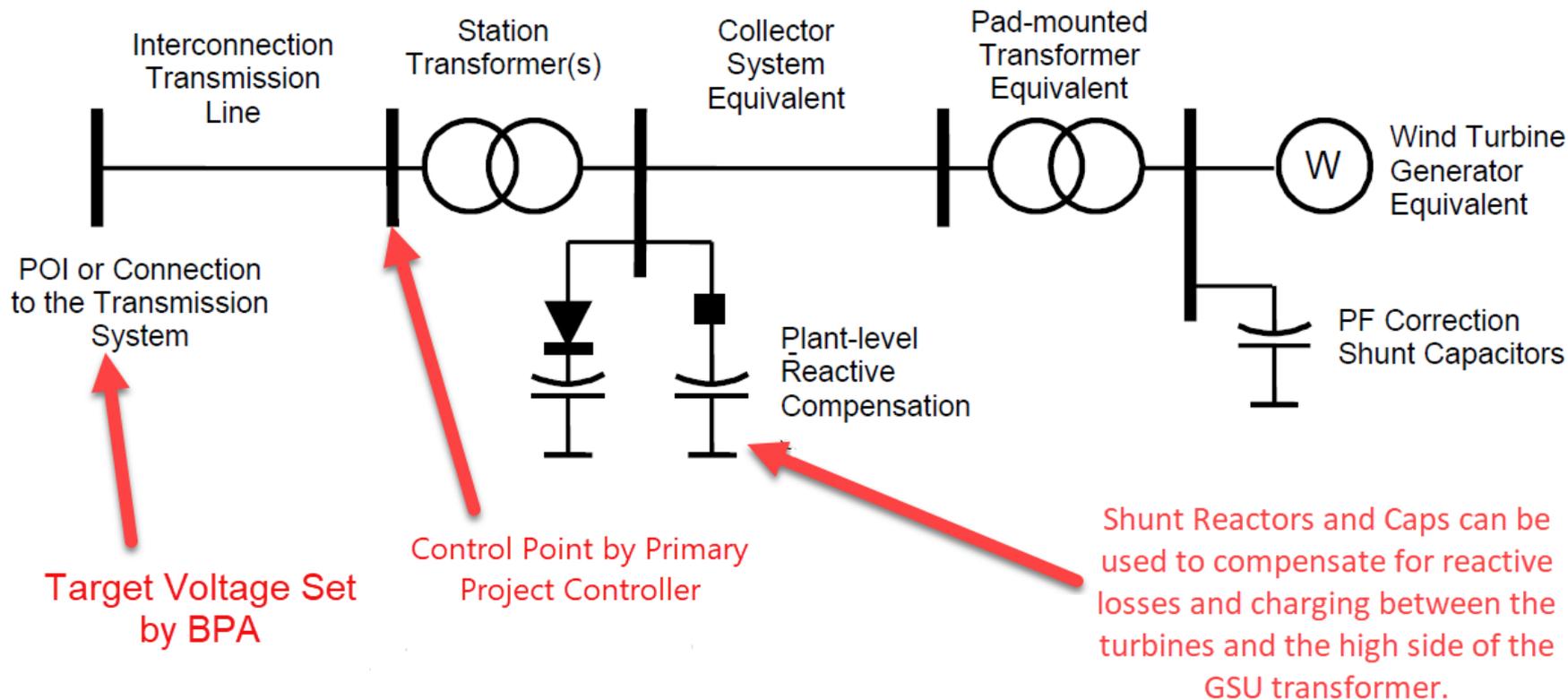


BPA Voltage Schedules

- <https://transmission.bpa.gov/Business/Operations/misc/BPAKVSCHEM.xls>

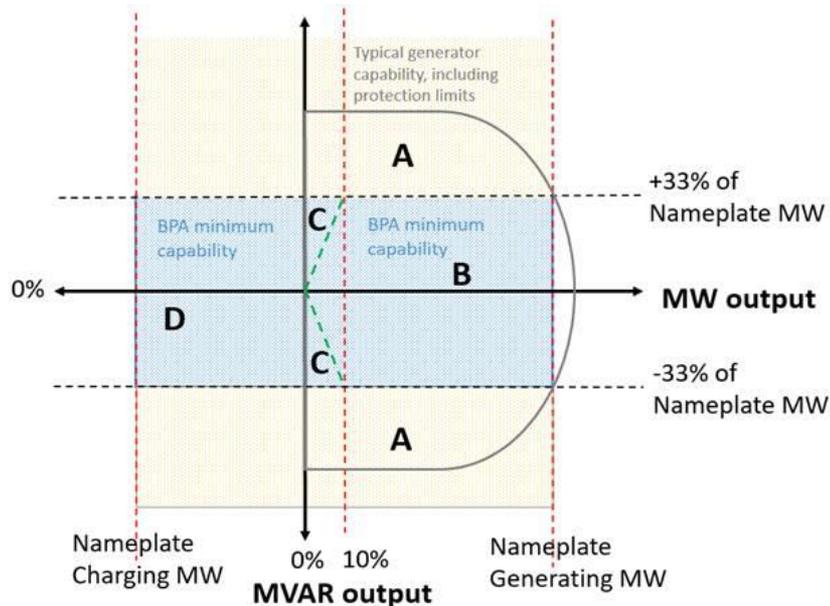
GENERATION SCHEDULES										
PLANT	BUS KV	TARGET	HI	MED	LOW	BAND (+/- kV)	REFERENCE VOLTAGE	DATE	REMARKS	
FEDERAL-----										
ALBENI FALLS	115	117	117	117	117	3	Albeni Falls 115 bus	Feb-92	Flat 117kV schedule	
BONNEVILLE	115		120	119	118	2.5	Bonneville PH 115 bus	Dec-09		
DWORSHAK	115	115	115	115	115	3	Dworshak 115 bus	May-78		
FOSTER	115	118	121 MAX		115 MIN	3	Foster 115 bus	Aug-10		
GRAND COULEE(USBR)	115		120	117	116	3	Grand Coulee 115 bus	Mar-16		
ICE HARBOR	115		119	118	117	3	Ice Harbor 115 bus	Feb-88	WINTER (OCT-APRIL)	
ICE HARBOR	115		120	119	118	3	Ice Harbor 115 bus	Feb-82	SUMMER (MAY-SEP)	

Wind Plant Example – POI vs. Voltage Control Point



Dynamic Voltage Control

Areas A-D explained below:



A: Exceeds Minimum Plant Reactive Capability region, **comprised of dynamic devices and any static devices if applicable.** A plant is permitted and encouraged to be capable of operating in this region.

B: Minimum Plant Reactive Capability region, comprised of **dynamic** reactive power devices. Required for any MW output level.

C: Plants with inverter technology unable to meet the Minimum Plant Reactive Capability at real output levels of 10% or less than nameplate MW may request a study to determine if reduced dynamic MVAR capability is permissible. Plants shall not have artificial settings imposed to limit reactive power output in this region.

D: Energy storage components must provide dynamic reactive support equal to 33% of Nameplate for any charging levels (negative MW), as most storage components are expected to be synchronous or otherwise interconnected via capable inverter technology.

Other Voltage Considerations

- Standard Droop setting: 4.5%
- If you are next to other projects, we may need to adjust the droop setting so the projects don't interfere with each other.
- You may still need shunt reactors or shunt caps to mitigate for charging and losses to the high side of the GSU to ensure that the dynamic reactive requirement is met.
- System shunt reactors or shunt caps may still be needed at the POI substation. These would be installed, owned, and operated by BPA.
- The new standard applies to any request that does not yet have a Facility Study Report. If a project has a Facility Study Report, they may choose to comply with the new standard rather than the old.

Oversupply 2020 Season Overview

Loss Waivers

System Test



2020 OMP Recap

- The Jan-Jul water volume for 2020 was 101.6 MAF vs 2019 which was 90.2 MAF. Typically, the Jan-Jul water volume average is 103.3 MAF. Its hard to say what this year's runoff will yield.
- In 2020, there were a total 7 OMP triggered event days totaling 35,024 MWhs of Oversupply relief. This activity was spread over 71 hours in June (primarily in the last 5 days of the month).
- One of the tools BPA uses to mitigate Oversupply conditions is waiving losses. BPA waived a total of 93,780 MWhs during the period of 5/20 – 6/30.
- Additionally, the Columbia Generating Station (CGS) was operated at reduced output to mitigate Oversupply totaling 392,969 MWhs.
- Overall, there were 30 generators displaced that totaled \$1,379,225 in displacement costs last year.

OMP Generator Displacement Costs 2021 Submittal Period

- The submittal period for generators to provide their facility's displacement costs will begin March 2021.
 - Generators can register on the [Accion site](#).
 - Submissions must be completed by March 15.
- Per Attachment P, generators must submit their facility's displacement costs for inclusion in the Least-Cost Displacement Curve. Before submitting displacement costs, please ensure they are eligible for reimbursement.
 - Failure to submit displacement costs will result in a displacement cost of \$0/MWh for that facility.

Minimum Generation Reminders

- Minimum Generation Values are entered into the Customer Data Entry (CDE) System.
 - Min Gen levels are equal to or less than a resource's schedule or generation estimate.
 - Hourly values may be modified until 20 minutes before the operating hour.
 - Resources may follow their maximum ramp rate when following a Dispatch Order to reduce to their Min Gen.
 - See BPA's OMP Business Practice for more information at:
<https://www.bpa.gov/transmission/Doing%20Business/bp/Pages/Business-Practices.aspx>

Loss Waivers

- **Waiving Loss Obligations**
 - BPA will make the determination to waive losses on the day prior to the WECC preschedule trading day.
 - Loss obligations will be cleared from the OATI Loss Module/CDE by 5am on the WECC preschedule trading day.
 - If a transmission customer schedules loss returns for a waived hour, then its loss tags will be curtailed for that hour.
 - No changes were made to last year's loss waivers program.

OMP Annual System Test

- OMP Annual System Test will be conducted the week of March 22nd.
- OMP will be tested for one hour, likely less.
- No displacement of generation below schedules is expected.
 - All Generators should limit to Schedule (or Generation Estimate for behind-the-meter).
 - No Cost Generators are not required to reduce to Minimum Generation
- No FTC or OMP credits will apply during the test period
 - Failure to respond will likely receive follow up after the fact from BPA.
 - Compliance with other Dispatcher directives is necessary as usual.

Where to Find More Information

- Questions regarding the Accion website should be directed to:
https://oversupply.accionpower.com/_bpa_1901/accionhome.asp
- For BPA's OMP Business Practice, go to:
<https://www.bpa.gov/transmission/Doing%20Business/bp/Pages/Business-Practices.aspx>
- For BPA's OATT Attachment P, go to:
<https://www.bpa.gov/transmission/Doing%20Business/Tariff/Pages/default.aspx>
- For other questions on BPA OMP, email techforum@bpa.gov with "Oversupply" in the subject heading.

Reminders



Other Reminders

- Sign up for Tech Forum notifications at
 - <https://www.bpa.gov/contact/forms/pages/transmission-contact-information.aspx>

- Background information on BP's Rate Case (BP-22) and/or Transmission Terms and Conditions (TC-22) is available at:
 - <https://www.bpa.gov/Finance/RateCases/Pages/default.aspx>

- Stay tuned for Tech Forum notification of upcoming proposed changes to BPA's Business Practices.

Schedule of Outages for Spare Transformer Program 2021

- **Rock Creek** – Proposed outage October 2021
 - **John Day** – Installed
 - **Central Ferry** – Installed
 - **Slatt** – Proposed October 2021
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- **FUTURE HUB SITES** – 4th phase is no longer optional where we need to install a 500/230 kV transformer.

BPA's New ATC Mapping Tools Available

- <https://www.bpa.gov/transmission/Reports/TransmissionAvailability/Pages/default.aspx>

